



SMART TECHNOLOGY
FOR SMARTER MOBILITY

PRESS KIT

VALEO INNOVATIONS
ON SHOW AT CES 2022 – LAS VEGAS
January 2022



Contents

Valeo addresses the mobility revolution at CES 2022	p. 3
Valeo and the acceleration of vehicle electrification	p. 4
<ul style="list-style-type: none">- Eight Valeo technological platforms dedicated to the electrification of all types of vehicles- All-round expertise in high-power solutions delivered through the Valeo-Siemens eAutomotive joint venture in the Mercedes-Benz EQS- Valeo, world leader in 48V systems suited to all new forms of mobility- Valeo's all-electric motorcycle (Valeo 48V Motorcycle)- 48V electric bicycle assistance (Valeo Smart eBike System)- No high-performing electric vehicles without adapted thermal systems	
Valeo and the acceleration of driving assistance systems	p. 8
<ul style="list-style-type: none">- Valeo's third-generation LIDAR at CES 2022- Valeo's new NFL LIDAR with 360° near-field vision- Valeo Mobility Kit, the most accessible intelligence- Valeo eDeliver4U, intelligent delivery	
Valeo and the acceleration of vehicle onboard intelligence	p. 11
<ul style="list-style-type: none">- Valeo VoyageXR Panorama provides a drone's perspective – without the drone- The intelligent interior for improved safety, with Valeo Safe Insight- Valeo's health shield for traveling well away from viruses- Valeo's Covid-19 detection terminal, a part of the smart cabin experience- Valeo Odor Free, the solution for a more breathable vehicle cabin- Valeo AirSight, a dynamic pollution sensor that monitors city air quality	
Valeo and the acceleration of smart lighting	p. 14
Valeo, technology leader, in brief	p. 15

Valeo addresses the mobility revolution at CES 2022

Valeo will present five major innovations transforming and shaping a cleaner, safer, more autonomous, more connected mobility at this coming CES tech event held in Las Vegas from January 5 to 8, 2022. Never has the industry experienced a combination of such seismic upheavals at the same time.

Four major changes are taking place: the electrification of vehicles is gaining ground everywhere and is accelerating; assistance (ADAS) is booming; vehicle onboard intelligence is developing rapidly; and lighting is undergoing a profound transformation to offer more and more new features.

In these four areas, Valeo enjoys both technological and industrial leadership. The Group has invested 11 billion euros in Research and Development over the last five years alone, and at the same time, has built up the appropriate production facilities. Valeo takes a holistic technological approach, effectively combining hardware, electronics and software. Valeo brings intelligence into the vehicle so that future generations can live in a more breathable world with safer roads.

Valeo has anticipated these profound changes. In just over a decade, it resized its operations and redefined its technological focus. From 2009 to 2021, driving assistance sales increased 9-fold, while vehicle electrification sales expanded 26-fold.

Today, 94% of Valeo's sales are derived from technologies that help to reduce CO₂ emissions and improve road safety.

The transformation is so vast that nearly 60% of the Group's order intake is for products that didn't exist three years ago. Valeo will continue to forge ahead in the innovation race.

The innovations presented at CES 2022 attest that Valeo has scaled up to become a major global mobility player. Its smart technologies, i.e., software, algorithms and artificial intelligence solutions, are no longer just for cars. These technologies can now be fitted on all new forms of mobility, beyond the realm of vehicles, and integrate infrastructure to create new services, invent new travel experiences and help us live healthier lives.

Valeo and the acceleration of vehicle electrification

The mobility of goods and people will be electric. New regulations all point in this direction. Automakers are designing or renewing their line-ups using electric motors. The electrification market is set to grow five-fold by 2030. This is promising for Valeo, which has all the technologies needed to massively reduce CO₂ emissions.

Valeo has the full spectrum of electric powertrain systems, from low to high voltage.

Their applications range from small urban vehicles to high-performance cars, and cover new forms of mobility such as bicycles, three-wheelers, delivery droids and robotaxis.

Valeo has the brains to control electric motors.

The brains are the inverters with millions of lines of code. They efficiently control the electrical flows in the car. With those, every electron is used efficiently, to support performance, comfort and range.

Valeo has the reducers

The current reducer is the equivalent of an internal combustion-engine car's gearbox (an electric car no longer needs one). It adapts the rotation speed of the electric motor, which is very high, to that of the vehicle's wheels.

Valeo has the onboard chargers and current converters

They have the intelligence to safely and efficiently power the batteries. The converter (DC/DC) adapts the high-voltage current from the traction battery to all the electric vehicle's equipment.

Valeo has smart thermal systems.

Smart thermal systems mean intelligent thermal management, which includes battery temperature management solutions, air conditioning, heat pumps and low-energy comfort and heating systems.

Valeo has smart charging stations (too).

The charging stations are suitable for all cars, whether electric or plug-in hybrids, whatever their voltage. They charge batteries when electricity is cheapest or when it comes from a green source such as solar panels or wind power. They can reinject power onto the grid when needed.

For Valeo, electrification means greater value. Content per vehicle is multiplied by nine for high-voltage solutions, by two for low-voltage solutions and by three for vehicle thermal management systems. By the end of 2022, around 100 electric and plug-in hybrid models will be fitted with Valeo's smart thermal and powertrain systems.

➤ Eight Valeo technological platforms dedicated to the electrification of all types of vehicles

The rise of electric vehicles has changed the architecture of the car, i.e., the technical structure comprising the powertrain, transmission, chassis, running gear and other components.

To adapt to these changes, Valeo has revamped its technology portfolio. Thanks to significant R&D investments in recent years, the Group has created eight technological platforms for vehicle electrification, out of 12 in all, including those dedicated to driving assistance.

Solutions are manufactured on a large scale, thus making them more affordable. As they are highly modular, they can be tailored to the wide-ranging needs of vehicle manufacturers. A single product, like a 48V motor for instance, can be applied in different systems in various ways. Starting from a common base, Valeo's solutions can be used to create electrical systems for hybrid cars as well as all-electric motors for different vehicles.

➤ **All-round expertise in high-power solutions delivered through the Valeo-Siemens eAutomotive joint venture in the Mercedes-Benz EQS.**

Through the Valeo Siemens eAutomotive joint venture, Valeo is a world leader in high-voltage (above 60V) systems for electric vehicles.

At CES 2022, Valeo is offering to test the new Mercedes-Benz EQS, the flagship vehicle of Daimler's electrified range. It is entirely powered by a Valeo-Siemens eAutomotive system. The electric powertrain is composed of two eAxle systems [*the units placed in the middle of the car's axle that include the electric motor, transmission and power electronics*] installed at the front and rear of the car. The electric drive system includes the electric motor, the inverter (the brain of the system) and the reducer (the equivalent of the gearbox). The rear eAxle provides 300 kW of power, the front axle 170 kW. The systems can be used separately or together.



The Mercedes-Benz EQS is also equipped with Valeo's thermal systems (powertrain cooling and air conditioning systems).

➤ **Valeo, world leader in 48V systems suited to all new forms of mobility**

Valeo is a pioneer and world leader in 48V automotive systems. Originally designed as affordable hybrid electrification solutions, Valeo's 48V systems were developed into an all-electric powertrain solution.

48V systems have taken off across the world and Valeo is their leading promoter. Group sales of 48V solutions increased 2.5-fold between 2019 and 2021.

The performance of Valeo's powertrains is adapted to their use: a four-wheeled vehicle powered by Valeo's 48V system that can carry two people, can reach a speed of 100 km/h with a range of 150 km. That's why Valeo was chosen by Citroën to supply the motor for its Ami electric car. Small and made for urban city centers, Valeo's all-electric 48V powertrain will be demonstrated on a Citroën Ami at the CES show in the sprawling streets of Las Vegas.

➤ Valeo's all-electric motorcycle (Valeo 48V Motorcycle)

At CES, Valeo is presenting a prototype of a small all-electric motorcycle. This compact and light (less than 17 kg) system integrates the 48V air-cooled electric motor, the transmission and the associated intelligence (the computer and the software controlling the electrical flows).

Powered in this way, the prototype is the equivalent of a 125 cc motorcycle. But more efficient! In fact, more than 90% of the power generated by Valeo's electric motor reaches the rear wheel, whereas an internal combustion engine sends only one-third of its power to the wheel.

This powertrain system, with its robust and proven technology and its affordable cost, is particularly well-suited to the Southeast Asian markets. Small cylinder two-wheelers are very popular there. By emitting zero grams of CO₂, Valeo's system is also a relevant environmental solution for urban and suburban areas with heavy traffic.



➤ 48V electric bicycle assistance (Valeo Smart eBike System)

In a world first for electrically assisted bicycles, Valeo has designed a transmission that integrates the 48V electric motor, the seven-speed automatic gearbox (developed in partnership with Effigear) and cyclist-specific control software directly into the pedal assembly.

This system generates 130 Nm of torque, which is enough force to easily climb a slope. Pedal effort is multiplied by eight. On a cargo bike with a 150 kg load, parking ramps are climbed with minimum physical effort. Valeo's solution also offers energy regeneration during braking (for cargo bike configurations).

Regardless of the type of electrically assisted bicycle, it's easy to use. No more derailleurs, sprockets or handlebar gear shifts, or any of the cables that go with them. Valeo's entire expertise in terms of automatic transmissions for cars is applied here to bikes.



At CES 2022, Valeo is presenting a touring bike, a mountain bike and a cargo bike, all powered by Valeo's 48V system, offering a glimpse of the kind of bikes that will go into series production in 2022.

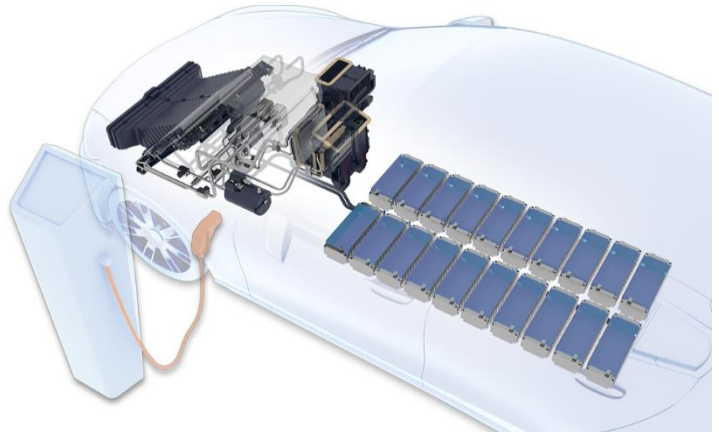
➤ No high-performing electric vehicles without adapted thermal systems

Without innovative thermal systems, the electrification revolution wouldn't be possible. Valeo has developed comprehensive expertise in this area, covering both battery thermal management and in-vehicle comfort.

Charging batteries rapidly makes them very hot. To counteract this heating effect, Valeo has developed cooling technologies that adjust to the intensity and speed of the charge.

Valeo has also designed all the thermal control technologies the battery needs when it is operating. This is crucial to preserving the battery's range and lifespan.

Heating, defogging and cooling in the cabin all consume energy, thereby reducing the electric car's range. Valeo has developed several innovations that solve the problem by giving passengers the comfort they need without compromising on range.



➤ Valeo FlexHeater, the smart heater designed for electric cars

At CES 2022, Valeo is showcasing the latest iteration of its smart cabin heating innovation, Valeo FlexHeater. This is a brand-new cabin surface heating technology which, paired with the smart air heating system, consumes 25% less electricity with four passengers on board and 50% less when the driver is alone, compared with a traditional heating system.

This level of efficiency is enabled by the technology (simultaneous heating of the walls and passengers with radiating heat, which prevents substantial thermal losses) coupled with Valeo's smart thermal control algorithm.

The FlexHeater radiant panels are thin, flexible and can be easily integrated into the cabin lining, whatever its constituent materials (plastic, fabric, leather, wood, etc.).



Intelligent and personalized controls make sense when the passengers in a vehicle have different thermal needs, such as in shared vehicles. In taxi cabs, comfort can be calibrated quickly, efficiently and silently, for different customers. In the case of small children in the backseat, the self-adapting system provides the necessary level of comfort without the need even being (or being able to be) expressed. Power consumption is adjusted accordingly for each passenger, without any losses, helping boost the vehicle's travel range.

This technology is a testament to the intelligence that Valeo brings to vehicles *[Check out all the other in-car intelligence solutions below]*.

Valeo and the acceleration of driving assistance systems

Valeo is the global leader in driving assistance or ADAS. One in three new cars is currently equipped with its technologies. And this market is expected to triple by 2030. What's our goal? To make roads safer.

Valeo committed to that objective 30 years ago. It all started with information given to the driver, with the ultrasonic sensor that beeps on detecting an obstacle. Then came Valeo's driving assistance systems capable of triggering emergency braking and keeping the vehicle in lane. Today, Valeo's technologies make it possible to safely delegate driving to the car.

Valeo controls the entire system, from the hardware, with the most advanced and complete sensor portfolio in the world, to the central electronic control units. They merge information and translate it into digital data that can be used by the software functions. Software is becoming an increasingly important part of vehicles and this will accelerate further.

The new Mercedes-Benz S-Class, the first car in the world to be equipped with Valeo's second-generation LiDAR SCALA®, can achieve level 3 autonomous driving with this technology, attesting to Valeo's leading position. Premium automaker Daimler announced on December 9, 2021 that it was "*the first automotive company in the world to meet the strict legal requirements of the United Nations standard (UN-R157) for a Level 3 autonomous system and to have obtained approval for this system from the German Federal Motor Transport Authority (KBA) (...)*". Markus Schäfer – Member of the Management Board of Daimler AG and Mercedes-Benz AG, Chief Technology Officer responsible for Development and Purchasing – said: "*With this LiDAR-based system, we have developed an innovative technology for our vehicles that offers customers a unique and luxurious driving experience.*"

Valeo's LiDAR is the first series-produced 3D laser scanner in the world to equip vehicles already on the market and to meet the demanding specifications of the automotive market, especially in terms of reliability. It offers unique perception capabilities regardless of weather conditions. More than 150,000 units have been produced since it was launched in 2017.

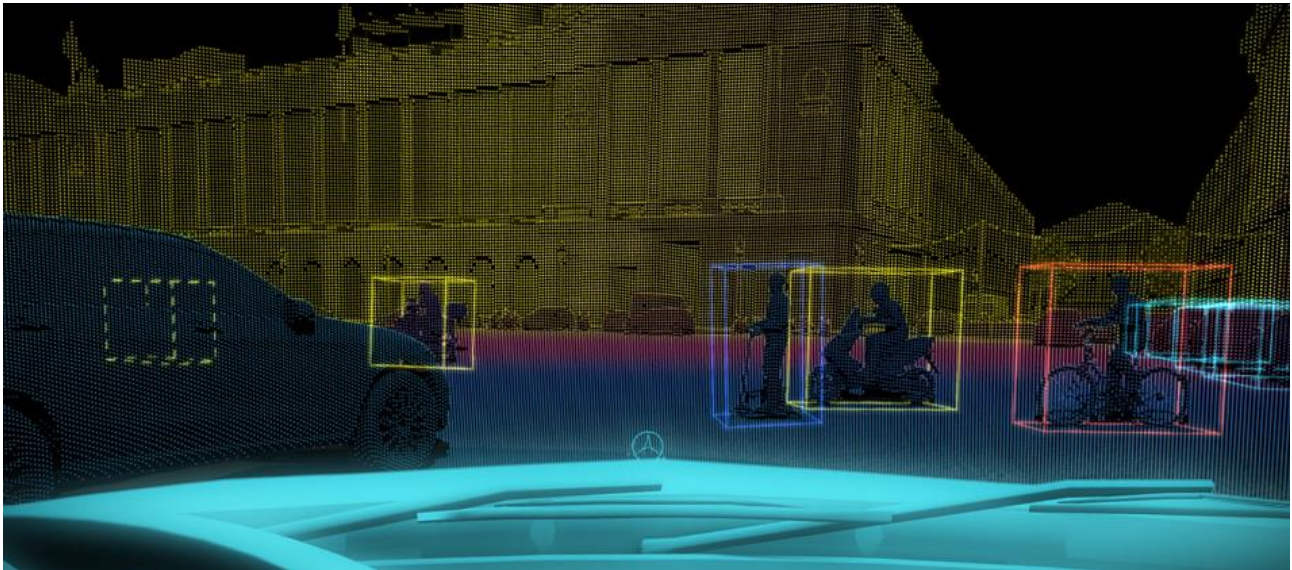
Valeo is going even further and unveiling its new LiDAR technologies at CES 2022.

➤ Valeo's third-generation scanning LiDAR at CES 2022

At CES 2022, Valeo's third-generation scanning LiDAR will be making its public debut, before hitting the market in 2024. Its primary purpose is to enhance road safety.

Thanks to its laser-based system, this Valeo scanning LiDAR can detect objects invisible to the human eye, cameras and radars, located at distances of 200 meters and more. It identifies everything on the road, even measuring the density of raindrops to calculate the right braking distance. It also uses algorithms to anticipate the trajectories of surrounding vehicles and trigger the necessary maneuvers accordingly. Thanks to its unique perception and analytical capabilities, driving can be delegated to the vehicle, including on the highway at speeds of up to 130 km/h.

In addition to the vehicles it will equip, Valeo's third-generation LiDAR will also alert other vehicles to dangers on the road so that everyone can benefit from its exceptional perception capabilities.

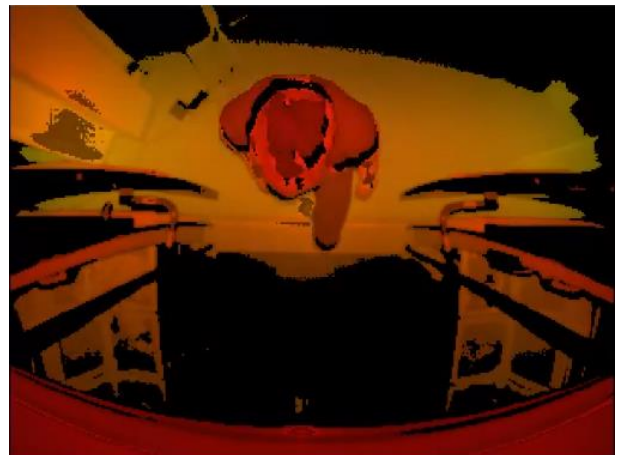


➤ **Valeo's new NFL LiDAR with 360° near-field vision**

In addition to its long-range LiDAR scanners, Valeo is adding a newly developed LiDAR for near-field vision, the Valeo NFL (Near Field LiDAR), which is making its world premiere at CES 2022.

When used on driverless autonomous technology, such as delivery droids and robotaxis, this innovation creates a safety “bubble” around the vehicle. As soon as the vehicle starts, it enjoys an instant, 360° vision of its surroundings so it can move around while steering clear of pedestrians and other obstacles.

When installed on a highly automated car, it provides redundancy with other sensors for peripheral vision, eliminating blind spots so that lane changes can be made in total safety, especially in autonomous mode.



➤ **Valeo Mobility Kit, the most accessible intelligence**

When people move less, objects come to them. That's how mobility takes on new forms and new vehicles emerge, such as droids and other small delivery robots.

Valeo provides ready-to-use technologies that can be integrated into these new driverless vehicles. The Valeo Mobility Kit comprises various sensors: ultrasonic, cameras, Valeo Scala LiDARs, Valeo NFL LiDARs [see technical explanations on previous pages]; electronic control units and algorithms. Valeo also offers perception, geolocation and control software.

These driverless logistics solutions work using plug & play systems, meaning they are operational as soon as they are installed. New business can be created leveraging proven Valeo technologies to deliver automotive quality and reliability at affordable costs thanks to series production. Valeo adds the

evolutionary aspect: the kits' configuration makes them easy to adapt to all types of systems and applications chosen by the operator.

➤ **Valeo eDeliver4U, intelligent delivery**

Valeo eDeliver4U is an autonomous last mile delivery droid. This all-electric vehicle is a synthesis of Valeo's technologies.

Its powertrain system is based on the all-electric 48V platform, integrating, in addition to the motor, the inverter, the speed reducer, the current converter and the onboard battery charger.

Its autonomous driving system uses technologies integrated into Valeo's Mobility Kit [see explanations above].



Finally, Valeo eDeliver4U brings together plug & play visibility, lighting and signaling systems that are immediately ready to use. The goal is multifaceted: keep sensors operational no matter the conditions [see *technical details below*]; let the droid see and be seen by everyone, especially pedestrians; and communicate using HD-resolution screens, with people interacting with the droid.

This droid is equipped with a multitude of sensors enabling it to analyze its surroundings. These sensors need to remain clean at all times. Valeo drew on its expertise in wipers to design systems that ensure that cameras, radars and LiDARs always have a clear field of vision, in all seasons, all weather and all road conditions. It has designed several fully automatic systems that use either fluid saving cleaning nozzles or centrifugal lenses capable of getting rid of anything that obstructs the sensors' vision.

The Valeo eDeliver4U prototype can travel at about 12 km/h autonomously in dense and complex urban environments. It can travel 100 km between two charges without generating any pollutant emissions. This prototype gives us a glimpse of what home delivery could look like in the near future, especially in the ever-growing number of zero-emissions zones that are being created around the world.

Valeo and the acceleration of vehicle onboard intelligence

ADAS technology was designed to assist, help, protect and unburden drivers. Now Valeo has extended its role to inside the vehicle by creating the smart cabin. Vehicles no longer just move people from A to B. They take care of them too, offering comfort and well-being adapted to their needs.

➤ Valeo VoyageXR Panorama provides a drone's perspective – without the drone

In addition to driving assistance, Valeo perception systems and the intelligence of their related software can offer new experiences blurring the boundaries between real and virtual.

That's what Valeo VoyageXR Panorama technology does, unveiled for the first time at CES 2022. Valeo VoyageXR Panorama provides a drone's perspective – without the drone. In practice, it displays on a screen a 3D, 360° view of your car driving down the road, as if it were filmed by a drone, despite there not being one.



With this connectivity, your loved ones can see your vehicle's surroundings in 360-degree augmented reality using just a tablet, even from the other side of the world. And with a swipe, they can drive the "drone" flying over your car.

This technology can also help with parking or remote driving of autonomous vehicles.

➤ The intelligent interior for improved safety, with Valeo Safe Insight

Valeo Safe Insight technology, first introduced to the general public at CES 2022, combines three safety technologies:

The Valeo Driver Monitoring System (DMS) identifies the driver by scanning their face then sounds a warning in the event of distraction or drowsiness. The system ensures that the driver has their eyes on the road when they need to



resume driving in manual mode, in Level 3 and 4 automated vehicles. And in "manually driven" cars, the Valeo Driver Monitoring System technology can help reduce accidents related to fatigue and distraction (these account for 54% of fatal accidents in Europe).

The independent European New Car Assessment Program (Euro NCAP) recently included in its roadmap the addition of DMS technology in relevant safety systems and a child detection requirement starting in 2022 *[see technology below]*. In the United States, Joe Biden's Infrastructure Investment Plan, submitted Friday, November 5, 2021 to the House of Representatives, includes provisions concerning driver distraction and child safety. Valeo's technologies provide a concrete response to these measures.

The Valeo Interior Monitoring System (IMS) recognizes when passengers are on board, determines where they are sitting and reminds them to buckle their seatbelt if necessary.

And the Valeo Interior Radar System (IRS) detects when there is someone in a stationary car and raises the alarm in case a child has been left behind.



➤ Valeo's health shield for traveling well away from viruses

In a world where we have to learn to live with viruses, safety has to be understood in its broadest sense. Valeo innovations protect people's health while they travel. Valeo is the world leader in vehicle air treatment systems designed to ensure a healthy cabin environment.

Its innovations protect people from pollutants, germs and viruses, transforming the vehicle into a "health shield". This is due to Valeo's high-efficiency vehicle cabin air filters, which block 96% of allergens and 99.4% of viruses.

Air quality is a crucial issue in buses, coaches and other means of public transportation. Valeo designed the UV Air Purifier system which eliminates over 95% of viruses throughout the journey, including Covid-19. Its effectiveness against SARS-CoV-2 has been scientifically proven by the Frankfurt University Hospital and the Institute for Laser Technologies in Medicine and Metrology at the University of Ulm (ILM). This technology can easily be installed on existing buses or coaches. More than 2,000 buses have already been equipped worldwide.

➤ **Valeo's Covid-19 detection terminal, a part of the smart cabin experience**

Drawing on its expertise in passenger physiological and thermal comfort monitoring and driver control, Valeo has developed a health risk assessment terminal. By merging data sets from Valeo's sensors, it can detect Covid-19 symptoms and provide a first diagnosis in under two minutes without any patient contact, as accurately as a PCR test.

Covid-19, a highly mutagenic virus, requires regularly adjusting risk and associated symptom assessments, which the evolutionary intelligence of Valeo's terminal can do.

New clinical trials are planned in various medical research organizations around the world: in North Africa and the Middle East (Morocco, Tunisia, Egypt), in Asia (India, Thailand) and in Europe (Belgium and France) in order to make the diagnostics of Valeo's solution even more robust.

In addition to Covid-19 detection, Valeo will offer a portable, miniaturized solution for monitoring vitals, without patient contact. This can make managing patients in healthcare center emergency rooms easier.



➤ **Valeo Odor Free, the solution for a more breathable vehicle cabin**

At CES 2022, Valeo is premiering an innovation that neutralizes (in the original meaning of the word, i.e., makes neutral) odors in a vehicle. Perfume isn't diffused to mask persistent odors in the car, but the diffusion of a "white" fragrance that cancels out the perceived smell.

This technology is not the product of perfumer know-how; instead, it uses algorithms developed alongside the start-up Moodify. Developed in cooperation with university researchers from the olfactory research laboratory of the Weizmann Institute (Israel), Valeo Odor Free translates smell into digital media, as can be done for vision and sound. Like noise that can be reduced by a sound of a different frequency, Valeo Odor Free eliminates the perception of an unpleasant odor by stimulating the olfactory nerve.

This efficient, fast and rechargeable solution makes sense for shared mobility such as fleets of vehicles, taxis or rental cars. It can also be adapted to buses. The second-hand market is another outlet for this solution: a deodorized vehicle sells better.

➤ **Valeo AirSight, dynamic mapping of city air quality**

Valeo AirSight is a real-time analysis service for air quality, with mobile pollution sensors. Installed in vehicle fleets, the modules in Valeo sensors can continuously measure small particulates (down to PM1.0) and nitrogen dioxide (NO₂) in the air and continuously transmit the data to the cloud. This feeds into a dynamic air quality map in real time.

This analysis service can be a valuable tool for public authorities, cities, regions, air quality agencies, data collectors and service providers for which monitoring air quality is a top priority.

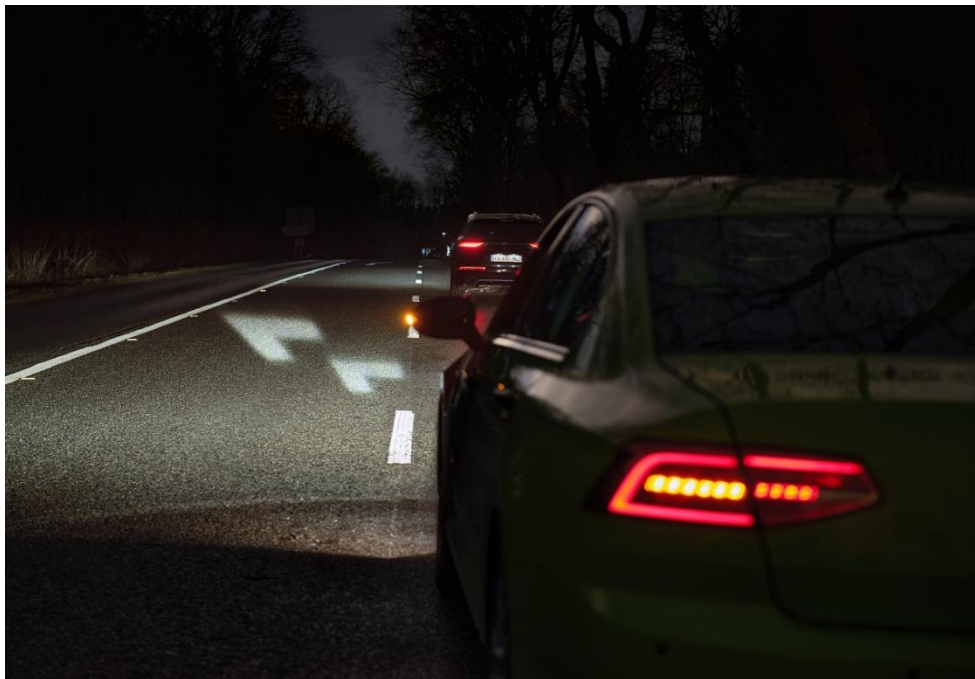
Valeo and the acceleration of smart lighting

Visibility systems (lighting and wipers), areas in which Valeo is world leader, are a powerful driver of improved road safety. One figure sums it up: 72% of fatal road accidents occur at night, when visibility is most impaired.

Just as mobility is undergoing several simultaneous revolutions, car lighting is also currently undergoing a transformation like never before. To put it simply, lighting is no longer just for lighting alone.

It is already an essential element in the identification of car brands. With electric vehicles however, light signatures can take on even more importance. Electric motorization gives more freedom relative to technical constraints. For example, there is no longer a radiator on the front of the hood. The lighting design can then be expressed on a larger surface to reinforce the features of the car's "face".

With its embedded intelligence, lighting informs, guides, alerts and accompanies its users. It warns drivers to be vigilant, e.g., by pointing out cyclists on the side of the road. It draws the curves of the road on the pavement. It warns the vehicle behind, with the rear lamps, of a potential danger. Valeo already has all these technologies operational and ready for mass production. As soon as the regulations - allowing lighting to perform new functions – will come into force, Valeo will be able to supply them to automakers.



Lastly, it creates new customizable atmospheres in the cabin.

Valeo's specificity is to make these cutting-edge technologies compatible with the automotive industry, i.e., offering them at affordable costs. Not only for premium segments, but for all types of vehicles. When autonomous vehicles are driving in traffic, Valeo's 360° lighting technology will also give them enhanced and relevant communication possibilities.

Valeo, technology leader, in brief

Valeo is a technology company uniquely positioned at the heart of the revolutions shaping mobility. Valeo develops technologies that facilitate the shift to cleaner, safer and smarter mobility, with the determination to make them accessible to all.

Valeo is the world leader in vehicle electrification and driving assistance systems (or ADAS) – the two markets set to experience the most growth in the coming years due to regulations and aspirations for safer, cleaner mobility.

Over the past ten years, Valeo has invested more than 10 billion euros in technologies that reduce CO₂ emissions. The Group's sales (16.4 billion euros in 2020) from technologies that reduce CO₂ emissions have grown 20-fold since 2009 and are set to reach around 10 billion euros in 2021.

Last year, Valeo invested 12% of its original equipment sales in R&D – a ratio comparable with that of the world's tech giants rather than its industry peers. The Group employs 20,000 engineers in R&D (compared with 6,000 in 2009). Its innovations are protected by a portfolio of 34,000 active patents worldwide.

Valeo, a leader in each of its businesses

- Powertrain Systems: world no. 1
- Driving Assistance Systems: world no. 1
- Lighting and Wiper Systems: world no. 1
- Thermal Systems: world no. 2